



2005 Minerals Yearbook

GREECE

THE MINERAL INDUSTRY OF GREECE

By Harold R. Newman

The mineral industry, which consisted of the sectors that mine and process metallic and nonmetallic minerals, was a small but important segment of the Greek economy. The majority of mining companies were well organized and well developed and had a strong export orientation.

The metallic minerals sector involved a relatively small number of large capital-intensive companies that were, in some cases, vertically integrated; that is, they were engaged in both mining and metallurgical processing. Typical examples were Aluminium de Grèce S.A., which was a producer of bauxite, alumina, and aluminum, and Larco G.M.M. S.A. (Larco), which mined laterite and operated the ferronickel plant at Larymna. Larco was the sole manufacturer of ferronickel in the European Union (EU). Companies dealing with industrial minerals were generally smaller in size but more numerous. They produced and commercialized a range of different products that addressed a variety of applications (Choose Media S.A., 2005¹).

Greece has a land area of 130,800 square kilometers (km²); borders the Aegean, the Ionian, and the Mediterranean Seas; and is located between Albania and Turkey. The country is peninsular with an archipelago of about 2,000 islands (U.S. Central Intelligence Agency, 2006a[§]).

In 2005, the gross domestic product (GDP) based on purchasing power parity was \$248.5 billion, and the per capita income based on purchasing power parity was \$22,392. The annual GDP growth rate was estimated to be 4.0%, the inflation rate was 3.5%, and the unemployment rate was 10% (International Monetary Fund, 2006[§]).

Government Policies and Programs

Greece has a capitalist economy with a public sector that accounts for about 40% of the GDP; its per capita GDP is about 75% of that of the leading eurozone economies. The country was a major beneficiary of EU aid, which was equal to about 3.3% of the annual GDP. Despite strong growth, Greece has failed since 2000 to meet the EU's Growth and Stability Pact budget deficit criteria of 3% of the GDP; inflation, public debt, and unemployment were also above the eurozone average. Further restructuring of the economy would need to include privatization of several state enterprises, pension and other reforms, and minimizing bureaucratic inefficiencies to help meet budget deficit criteria (U.S. Central Intelligence Agency, 2006a[§]).

Environmental Issues

Environmental concern is the responsibility of the Ministry of Environment, Town Planning, and Public Works. The Government takes an active role in environmental protection. The general laws that have been enacted by the Government

included law 1360/76 (Site Arrangement and Environment), Presidential Executive Order 1180/81, and law 1650/86 (Environmental Protection) and form the basis of the active legislative framework. The main environmental issues were air pollution and water pollution. Greece's natural hazard was severe earthquakes.

Production

Because northern Greece was thought to contain a significant amount of exploitable mineral resources, it received the most attention in exploration activities. In 2005, activities continued to be directed toward the search for gold. In terms of the value of production, bauxite was the most important of Greece's mineral commodities. Greece was a leading producer of bauxite, magnesite, nickel, and perlite in the EU (table 1). Major commodities and companies are listed in table 2.

Trade

In 2005, exports totaled \$18.5 billion, of which \$884 million went to the United States. Imports totaled \$48 billion, of which \$1,190 million was received from the United States. Exports of such minerals as bauxite, bentonite, nickel, and perlite made up a major share of total revenues. About 50% of the country's mineral production was exported (U.S. Central Intelligence Agency, 2006b[§]).

Commodity Review

Metals

Aluminum.—S&B controls the most significant bauxite reserves in Europe. The reserves were of diasporic and boehmitic type. Although the bauxite ore had an average alumina content of 53%, it also had a high silica content that made it hard to process. Production was distributed between open pit and underground mining. Of all the bauxite mined, the recovery rate was about 85%; the bauxite, in turn, was used as a raw material for the production of aluminum by electrolytic reduction. About 10% of the production was nonmetallurgical grade (Hellenic Center for Investment, 2005b[§]). Aluminium de Grèce S.A. (AdG) established its alumina and aluminum plants in 1960 at Agios Nikolaos on the northern coast of the Gulf of Corinth to take advantage of the important bauxite deposits. The site combines proximity to the large bauxite deposits of Boeotia and Phokifda, which were mined by Delphi-Distomon S.A. (a subsidiary of AdG), and sea transportation facilities.

Alcan Inc. of Canada announced that it had completed the sale of its controlling interest in AdG to Mytilineos Holdings S.A. of Greece. This followed the approval by the Greek Competition Commission and the Greek Ministry of Development. Mytilineos acquired a 53% equity interest in AdG at a cost of

¹References that include a section mark (§) are found in the Internet References Cited section.

about \$107 million. Mytilineos was one of Greece's leading players in the defense, energy, and metallurgy sectors (Alcan Inc., 2005§).

Greece was the leading bauxite producer in the EU. Bauxite is the principal raw material used in the production of alumina. The major bauxite deposits are located and developed within the Parnassos-Ghiona geotectonic zone that includes Giona, Elikonas, Parnassos, and the Oeti mountain region. Delphi-Distomon S.A. (a subsidiary of S&B Industrials S.A.) produced about 1 million metric tons per year (Mt/yr) of bauxite, which was sold to AdG's operation at Boeotia. Almost 72% of the market was covered by domestic production; the remaining 28% was covered by imports (Hellenic Competition Commission, 2005).

Gold.—Greenwich Resources plc reported that an appeal against its Sappes gold project was upheld by the Conseil d'État (State Counsel). The court was the country's highest authority regarding administrative acts, and its decision to uphold an appeal against the Sappes preapproval study (PAS) could result in the PAS being annulled. If the PAS were to be annulled, then Greenwich would be able to resubmit the Sappes project environmental impact study under more recent legislation, which does not require a PAS (Mining Journal, 2005).

In November 2004, European Goldfields Ltd. acquired a 65% interest in Hellas Gold S.A.; Aktor S.A., which was Greece's leading construction company, held the remaining 35%. These assets in northern Greece included three near-production deposits with a 70-year concession that covers an area of 317 km². The properties include the polymetallic deposits of Olympias and Stratoni, which contain gold, lead, silver and zinc, and the copper-gold porphyry deposit referred to as Skouries. All three deposits have been well defined with more than 200,000 meters (m) of drilling and the completion of feasibility studies and engineering studies (European Goldfields Ltd., 2006§).

In September 2005, Hellas Gold initiated startup procedures at the Stratoni Mine. Production of ore was expected to reach 170,000 metric tons (t) by the end of 2006 and to increase steadily to 400,000 metric tons per year (t/yr) by 2010. Based on historical production levels, the Stratoni Mine was expected to produce grades of between 8% and 10% lead, 8% to 10% zinc, and 200 grams per metric ton (g/t) silver, with concentrator metal recoveries of about 90%. The total estimated proven and probable reserves at Stratoni were 1.9 million metric tons (Mt) at grades of 8.1% lead, 10.8% zinc, and 190 g/t silver (European Goldfields Ltd., 2006§).

Hellas Gold entered into offtake agreements with Euromin S.A. of Italy, MDIL (UK) Ltd., and Trafigura Beheer B.V. of the Netherlands for the sale of lead/silver concentrates and zinc concentrates produced at Stratoni. Under the offtake agreements, Hellas Gold agreed to sell concentrates that represented about 90% of all projected production for 2005, 2006, and 2007; 65% of lead/silver production; and 25% of zinc production for 2008 (Metal Bulletin, 2005).

Frontier Pacific Mining Corp. acquired a 100% interest in Thracian Gold Mining S.A.'s Perama Hill project at yearend 2004 and, in 2005, was proceeding with the permitting and social acceptance aspects of the project. The Perama Hill project

is a high-grade oxide gold deposit. Roscoe Postle Consultants of Canada estimated the mineral resources, at a 1.0 g/t gold cutoff grade, to be 11.7 Mt at an average grade of 3.6 g/t gold and 8.3 g/t silver. The proposed annual milling rate was 1.25 Mt/yr through a conventional carbon-in-leach plant. The mine life was estimated to be 9 years (Frontier Pacific Mining Corp., 2005§).

Iron and Steel.—Corinth Pipeworks S.A. (CPW) was a steel pipe and hollow sections manufacturer for the construction, natural gas, petroleum, and water industries. CPW had a capacity of 700,000 t/yr. The Thisvi plant, which had two mills and lining and coating facilities, offered a wide range of products and services. The plant produced and coated medium- and large-diameter welded steel pipes and hollow sections with anticorrosive materials (externally and/or internally) (Corinth Pipeworks S.A., 2005§).

Nickel.—Larco was the only producer of nickel in Europe that used domestic nickel ores. Larco had three main mining areas—Evia (open pit), with annual production of about 1.5 Mt of ore; Agios Ioannis (underground), with an annual production of about 700,000 t of ore; and Kastoria (open pit), with annual production of about 300,000 t. The Larymna metallurgical plant consisted of 4 rotary kilns, 5 electric arc furnaces, and 2 converters with a capacity of 50 t each of metal. Annual production of nickel met about 6% of European market demand (Larco G.M.M.S.A., 2005§).

Industrial Minerals

Anhydrite and Gypsum.—Lava Mining and Quarrying Co.'s anhydrite and gypsum quarry is located at Altsi, on the island of Crete. Quarrying was carried out using explosives, and the quarried material was fed to trucks by means of loaders, then transported to the crushing plant. The end product that came from the plant consisted of anhydrite and hydrate gypsum and was used in the production of cement (Lava Mining and Quarrying Co., 2005a§).

Bentonite.—S&B Industrial Minerals S.A. was the leading bentonite producer in Europe and the leading bentonite supplier worldwide. S&B remained focused on industrial markets for bentonite for foundry uses and also for use by the drilling industry. S&B's reserves were located on the island of Milos (S&B Industrial Minerals S.A., 2005a§).

Cement.—Heracles Cement S.A., which was a member of the Lafarge Group, had the following three cement plants: one in Volos, which was the largest-capacity cement plant in Europe (4.6 Mt/yr); one in Halkis Evia; and one in Milaki Evia. Total production capacity of the plants was 9.6 Mt/yr, which made Heracles the leading cement producer in Greece. Heracles was also active in the sale of ready-mix and aggregate products (Capital Link Inc., 2005§).

Magnesium Compounds.—Grecian Magnesite S.A. (GM) was one of the leading magnesite producers in the Western world and the leading exporter in the EU. GM's major deposits and production facilities were located in the Gerakini area of the Chalkidiki peninsula. After mining, the material was processed, beneficiated, and fed into rotary or shaft kilns. GM produced and marketed caustic calcined magnesite, deadburned magnesia, and raw magnesite. The annual capacity for the conversion to

caustic or dead-burned magnesia was 200,000 t, about 97% of which was exported (Hellenic Center for Investment, 2005c§).

Perlite.—With a production of 650,000 t/yr, S&B was the leading producer of raw perlite worldwide and the leader in the European market for perlite used in building materials, cryogenics, formed products, and horticulture, and as filter aids. S&B mined perlite at Provatas, Thachylas, and Tsigrado on Milos Island (S&B Industrial Minerals S.A., 2005b§).

Pumice.—Lava Mining and Quarrying Co.'s pumice quarry was located on the island of Yali and was a product of volcanic action of the adjacent volcano at Nissiros. Quarrying of the deposit was performed without the use of explosives. Bulldozers fed a series of belt conveyors, screens, and crushers, which fed a graded product to stockpiles. Thereafter, a second series of belt conveyors fed ships of up to 30,000 t at a loading rate of 1,000 t per hour (Lava Mining and Quarrying Co., 2005b§).

Stone, Dimension.—In 2005, the Greek marble industry continued to play a leading role in the international dimension stone market. Marble production continued in almost all areas of the country for a variety of uses and in many colors (ash, black, brown, green, pink, red, and multicolored). The marble industry was active in the quarrying, processing, and sale of blocks and finished products.

Mineral Fuels and Other Sources of Energy

Coal.—Public Power Corporation (PPC) was Greece's major producer of lignite (brown coal), which was the predominant fuel in electricity generation in Greece. Most PPC lignite was produced from the Ptolemais-Amyntaion Basin; lesser amounts were produced from the Megalopolis Basin. Lignite reserves were estimated to be about 2,900 Mt. Because the country has no hard coal (black coal) reserves, it imports hard coal from, in descending order of amount imported, South Africa, Russia, Venezuela, and Colombia. Domestic production has been partly opened to private companies, but PPC was the leading producer, with the right to 63% of the reserves. Lignite accounted for about 65% of the raw material for the country's power generation (U.S. Energy Information Administration, 2005§).

Natural Gas and Petroleum.—With Greece's limited natural gas reserves and petroleum resources, production was negligible. Its Mediterranean location, however, makes it conveniently close to several important producing regions, such as the Caspian Sea area, the Middle East, and North Africa.

Greece's first privately owned powerplant, which is located in the Hellenic Petroleum industrial complex in Echedoros municipality, Thessaloniki, started operations in December 2005. The 390-megawatt (MW) plant produced electricity with the use of natural gas and was the first private investment in electricity production in Greece following the deregulation of the electricity and natural gas market. The 250 million euros (\$310 million²) plant built by Energiaki Thessalonikis S.A. was considered to be one of the country's most important investments in the energy sector (Athens News Agency, 2005§).

²Where necessary values have been converted from European Union euros (€) to U.S. dollars (US\$) at a rate of €1.00=US\$1.24.

Greece and Italy signed an agreement to construct an undersea natural gas pipeline between the two countries. The 212-kilometer (km) pipeline was to be built by Poseidon S.A. (a joint venture between Depa S.A. of Italy and Edison SpA of Italy). The pipeline will run from the northwest coast of Greece to the southeast coast of Italy and was expected to be completed by yearend 2009. Initially the pipeline will carry 2 billion cubic meters per year before rising to 8 billion cubic meters per year in 2012 (Schlumberger Ltd., 2005§).

Greece and Turkey inaugurated construction of a 300-km pipeline from Bursa, Turkey, to Komotini, Greece, that was expected to be operational by yearend 2006. The pipeline was expected to carry 11.5 billion cubic meters per year once connections were made to other pipelines as a part of the Southern Europe Gas Ring Project (Khaleej Times, 2005§).

Renewable Energy.—The Greek Government planned to create a steadily developing market for renewable energy sources that would boost entrepreneurship and regional development and attract new and foreign investments. The Government placed renewable energy sources, in particular wind energy, equally alongside electricity, natural gas, and liquid fuel in its energy program. It was estimated that in addition to the 490 MW of wind energy operating in 2005, another 1,500 MW to 2,000 MW of wind energy could be installed by 2010 (Hellenic Center for Investment, 2005a§).

Outlook

Greece is expected to remain a major supplier in the international market of industrial minerals. Mineral exploration activities in Greece will be intensified to secure additional high-quality reserves. Large investment programs could be planned to improve the existing installations and lower operating costs.

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Major Sources of Information

Institute of Geology and Mineral Exploration

70 Messoghion Street

11527 Athens, Greece

Ministry of Development

Directorate of Raw Materials Mineral Policy, Section A

80 Michalakopoulou Street

10192 Athens, Greece

TABLE 1
GREECE: PRODUCTION OF MINERAL COMMODITIES

(Metric tons unless otherwise specified)

Commodity ²	2001	2002	2003	2004	2005 ^e
METALS					
Aluminum:					
Bauxite	1,931,497	2,468,865	2,442,312	2,444,000	3,315,300 ³
Alumina, Al ₂ O ₃	678,934	749,500	758,800	760,000 ^e	1,757,110
Metal:					
Primary	163,581	165,262	167,797	167,300	165,000
Secondary ^e	3,000	2,000	3,000	3,000	3,000
Iron and steel:					
Iron ore and concentrate, nickeliferous, Fe content ^f	575,000	600,000	600,000	575,000	575,000
Metal:					
Steel, crude	1,281,000	1,835,000	1,701,000	1,967,000	2,266,000 ³
Ferroalloys, ferronickel, gross weight	88,755	97,761	95,376	96,000 ^e	95,000
Lead:					
Mine output, Pb content ^e	28,619 ³	29,300	20,000	--	--
Metal, secondary	5	5	4	4 ^e	4
Manganese:^e					
Ore, crude:					
Gross weight	90	100	100	100	100
Mn content	17	16	15	15	15
Concentrate:					
Gross weight	20	20	20	20	20
Mn content	9 ³	15	15	15	15
Nickel:					
Ore:					
Gross weight ^e	2,600	2,800	2,700	2,700	2,800
Ni content of nickeliferous iron ore	20,830	22,670	21,410	21,700	22,000
Metal, Ni content of ferronickel	17,750	19,230	18,000 ^e	18,115	17,300 ³
Silver, mine output, Ag content	61,500	74,800	79,200	78,000 ^e	78,000
Zinc, mine output, Zn content by analysis	20,461	33,000	30,400	-- ^e	--
INDUSTRIAL MINERALS					
Abrasives, natural emery	8,000	8,000	8,000	8,000 ^e	8,000
Barite, concentrate ^e	100	100	100	100	100
Cement, hydraulic ^e	15,500	15,000	15,300	15,000	15,000
Clays:					
Bentonite:					
Crude	1,258,872	1,056,598	1,156,642	1,160,000 ^e	1,200,000
Processed	26,297	15,806	10,835	11,000 ^e	11,000
Kaolin:					
Crude	60,075	57,885	59,680	60,000 ^e	60,000
Processed ^e	300	300	300	300	300
Feldspar	126,400	124,100	102,800	103,000 ^e	105,000
Gypsum and anhydrite	808,890	850,786	731,785	735,000 ^e	735,000
Magnesite:					
Crude	483,296	558,057	549,049	550,000 ^e	500,000
Dead-burned	30,113	48,220	43,713	44,000 ^e	40,000
Caustic-calcined	113,355	105,234	98,357	100,000 ^e	100,000
Huntite, crude ^e	18,000	18,000	18,000	18,000	18,000
Nitrogen, N content of ammonia	56,500	66,100	123,300	131,500	130,000
Perlite:					
Crude	840,660	838,997	1,079,036	850,000 ^e	1,000,000
Screened	449,139	515,715	739,729	525,000 ^e	550,000
Pozzolan, Santorin earth	1,308,131	1,291,198	1,383,546	1,400,000 ^e	1,400,000
Pumice	802,000	810,000	893,000	890,000 ^e	800,000
Salt, all types	208,776	126,118	192,161	190,000 ^e	190,000
Silica ^e	125,000	125,000	130,000	130,000	130,000

See footnotes at end of table.

TABLE 1--Continued
GREECE: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2001	2002	2003	2004	2005 ^e
INDUSTRIAL MINERALS--Continued					
Sodium compounds: ^c					
Carbonate	750	750	750	750	750
Sulfate	5,000	5,000	5,000	5,000	5,000
Stone: ^c					
Dolomite	90,000	90,000	90,000	90,000	90,000
Marble	202,069 ³	178,839 ³	233,436 ³	230,000	230,000
Flysch	80,000	80,000	75,000	75,000	75,000
Quartz, processed	6,500	6,500	6,000	6,000	6,000
Sulfur: ^c					
S content of pyrites	9,500	9,500	9,500	9,500	9,500
Byproduct, natural gas and petroleum	153,000	157,000	162,000	160,000	160,000
Talc and steatite	2,073	670	500	500 ^e	500
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Lignite	66,987	71,074	69,411	68,000 ^e	68,000
Lignite briquets ^c	34,000	35,000	32,000	32,000	32,000
Gas: ^c					
Manufactured, gasworks	15	15	15	15	15
Natural	36	36	36	30	30
Natural gas plant liquids	350	350	350	140	140
Petroleum:					
Crude	1,435	1,417	1,026	1,100 ^e	1,100
Refinery products:					
Liquefied petroleum gas	8,839	8,909	8,932	8,900	8,900
Gasoline	32,045	32,300	32,725	32,000	32,000
Naphtha	7,489	8,075	7,905	8,000	8,000
Mineral jelly and wax ^c	20	20	20	20	20
Jet fuel	14,168	14,725	14,400	14,000	14,000
Kerosene	93	101	116	115	115
Distillate fuel oil	40,672	41,031	41,776	42,000	42,000
Refinery gas	3,612	3,640	3,710	3,700	3,700
Lubricants	1,190	1,225	1,260	1,200	1,200
Residual fuel oil	50,000	49,280	49,617	50,000	50,000
Bitumen	3,066	3,091	3,151	3,200	3,200
Petroleum coke	886	908	880	900	900
Other	707	770	756	750	750
Refinery fuel and losses	7,434	7,455	7,490	7,500	7,500
Total	170,221	171,530	172,738	172,000	172,000

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. -- Zero.

¹Table includes data available through April 2006.

²In addition to the commodities listed, other crude construction materials are produced, but no basis exists for estimation of production.

³Reported figure.

TABLE 2
GREECE: STRUCTURE OF THE MINERAL INDUSTRY IN 2005

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina, Al ₂ O ₃		Aluminium de Grèce S.A. (AdG) (Mytilineos Holdings S.A., 53%)	Agios Nikolaos, Boeotia area	750
Aluminum		do.	do.	160
Asbestos		Hellenic Mineral Mining Co. S.A.	Mines at Zidani, near Kozani	100
Barite, BaSO ₄		S&B Industrial Minerals, S.A. (Eliopoulos-Kyriakopoulos Group)	Milos Island	1
Bauxite		do.	Mines at Phocis, plants at Phocis and Itea	2,000
Do.		Eleusis Bauxites Mines, S.A.	Mines near Drama, Itea, and Phthiotis-Phocis	300
Do.		do.	Plants in Aghia Marina, Drama, and Itea	400
Do.		Delphi-Distomon S.A.; Hellenic Bauxites of Distomon S.A. (Aluminium de Grèce S.A.)	Beotia and Phokifda Mines, Delphi-Distomon area	500
Bentonite:				
Crude		Mediterranean Bentonite Co. S.A. (Industria Chemica Mineraria S.p.A., Italy)	Surface mines on Milos Island	20
Do.		Mykobar Mining Co. S.A. (Silver & Baryte Ores Mining Co. S.A.)	Mines at Adamas, Milos Island	300
Do.		do.	Plants at Adamas, Milos Island	200
Do.		S&B Industrial Minerals, S.A. (Eliopoulos-Kyriakopoulos Group)	Mines at Adamas, Milos Island	600
Processed		do.	Plant at Voudia Bay, Milos Island	400
Cement		Halkis Cement Co. S.A. (Lafarge Group)	Micro-Vathi plant, west-central Euboea Island	3,000
Do.		Halyps Cement S.A. (Ciments Français, France)	Paralia Aspropyrgos plant, Athens	800
Do.		Heracles Cement S.A. (Lafarge Group)	Plants at Halkis Evia, Milaki Evia, and Volos	9,600
Do.		Titan Cement Co. S.A.	Elefsis plant, Athens area	400
Do.		do.	Kamari plant, Boeotia	2,600
Do.		do.	Patras plant, northern Peloponnesus	1,900
Do.		do.	Salonica plant, Salonica	1,650
Ferroalloys, ferronickel, Ni content		Larco G.M.M. S.A.	Larymna metallurgical plant	25
Gold, Au in concentrate	kilograms	Hellas Gold S.A. (European Goldfields Ltd.)	Kassandra Mines, Olympias	5,000
Gypsum		Lava Mining and Quarrying Co. S.A.	Altsi, Crete Island	500
Do.		Titan Cement Co. S.A.	do.	280
Hunite/hydromagnesite		Microfine S.A.	Mines in Kozani Basin	100
Lead, mine, Pb in concentrate		Hellas Gold S.A. (European Goldfields Ltd.)	Kassandra Mines (Olympias, Stratoni) northeastern Chalkidike	30
Lignite		Public Power Corporation (Government)	Aliveri Mine, Euboea Island	420
Do.		do.	Megalopolis Mine, central Peloponnesus	7,000
Do.		do.	Ptolemais Mine, near Kozani	28,000
Magnesite, concentrate		Grecian Magnesite S.A. (GM)	Mine and plant at Gerakini and Kalives, Chalkidiki, northern Greece	200
Manganese, battery-grade MnO ₂		Eleusis Bauxite Mines Mining, Industrial and Shipping S.A. [National Bank of Greece (OAE)]	Nevrokopi, Drama	10
Marble, slab	cubic meters	Aghia Marina Marble Ltd.	Pallini	100,000
Do.	do.	Chris G. Karantanis & Sons Co.	Korinthos	60,000
Natural gas	million cubic meters per day	Public Petroleum Corporation (Government)	Prinos offshore gasfield and oilfield, east of Thasos Island	125
Nickel, ore		Larco G.M.M. S.A.	Agios Ioannis Mine near Larymna	500
Do.		do.	Evia Mine near Larymna	1,500
Nitrogen, N content of ammonia		Phosphoric Fertilizers S.A.	Nea Karvall	150

TABLE 2--Continued
GREECE: STRUCTURE OF THE MINERAL INDUSTRY IN 2005

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Perlite		S&B Industrial Minerals, S.A. (Eliopoulos-Kyriakopoulos Group)	Mines on Kos and Milos Islands; plant at Piraeus	650
Do.		Otavi Minen Hellas S.A. (Otavi Minen AG, Germany)	Milos Island	150
Do.		Bouras Co.	Kos Island	50
Petroleum, refined	42-gallon barrels per day	Hellenic Aspropyrgos Refinery S.A.	Aspropyrgos	95,000
Do.	do.	Motor Oil (Hellas) Corinth Refineries S.A.	Aghii Theodori, Corinth	140,000
Do.	do.	Petrola Hellas S.A.	Eleusis	100,000
Do.	do.	Thessaloniki Refining Co. A.E.	Thessaloniki	76,000
Pozzolan (Santorin earth)		Lava Mining and Quarrying Co. (Heracles General Cement Co. S.A.)	Xylokeratia, Milos Island	600
Do.		Titan Cement Co. S.A.	do.	300
Pumice		Lava Mining and Quarrying Co. (Heracles General Cement Co. S.A.)	Yali Island	100
Quartz		do.	Adamas, Milos Island	150
Steel, crude		Halyvourgia Thessalias S.A. (Manassis Bros. and Voyatzis S.A., 65%, and National Investment Bank for Industrial Development, 35%)	Steelworks at Volos	1,500
Do.		Sidenor Steel Products Manufacturing S.A.	Steelworks at Thessaalonili and Almyros	2,800
Do.		Halyvourgiki, Inc.	Steelworks at Eleusis	1,200
Do.		Hellenic Steel Co.	Steelworks at Thessaloniki	1,000
Do.		Corinth Pipeworks S.A. (CPW)	Steelworks at Thisvi	700
Zeolite		S&B Industrial Minerals, S.A. (Eliopoulos - Kyriakopoulos Group)	Mine at Pendalofos; plant at Ritsona	100
Zinc, mine, Zn in concentrate		Hellas Gold S.A. (European Goldfields Ltd.)	Kassandra Mines (Olympias and Stratoni), northeastern Chalkidike	30